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## **METHOD OF IMMOBILIZING A SUBSTANCE OF INTEREST TO A SOLID PHASE**

### **FIELD OF THE INVENTION**

[0001] This invention relates to methods for preparing solid phases having desired molecules, such as ligands, attached thereto.

### **BACKGROUND AND PRIOR ART**

[0002] The use of solid phase materials in the field of analytical chemistry is well known. Many methods for identifying, separating, or otherwise working with desired molecules rely on the use of solid phase materials to which a binding partner, or reactive partner, of a given molecule, is attached. Representative of the type of materials which can be used as solid phases are test tube or cuvette walls, glass slides, synthetic surfaces like plastics, particles, especially inert particles, and beads, such as magnetic beads. The latter are especially useful because they can be removed very easily from a solution in which they are placed.

[0003] The “ligand” that is attached to the solid phase, or reactive molecule, may be any substance that interacts with a target to react with it, to remove it from solution, etc. Various biological and biochemical molecules, including proteins, antibodies, carbohydrates, nucleic acids, and lipids may be the ligand, as may inorganic molecules, such as hormones, vitamins, antibiotics, aptamers, signalling molecules, or any other material of interest may serve as the ligand or as a reactive material.

[0004] Due to their widespread use, it is of interest to optimize the preparation and production of solid phase materials, such as those described above. The resulting materials can be used, e.g., to determine ~~analyzer~~ analytes of interest when the ligand is, e.g., ~~aptamers~~ an aptamer, a signalling ~~molecules~~ molecule, an antibody or an antigen when the target molecule is an antibody or aptamer. Anytime a binding reaction of any type is of interest, one or more components of the binding reaction may be immobilized on the solid phase.

[0005] In the disclosure which follows, rapamycin is attached to magnetic beads; however, it is to be understood that the invention described herein relates generally to the